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2009 SEP -9 P 2:

AZ CORP COMMISSION
DOCKET CONTROL

September 8, 2009

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007

RE: SEPTEMBER 2009 AMI PLAN BIANNUAL ACC REPORT
DECISION NO. 68112
DOCKET NO. E-01345A-03-0775 and E-01345A-04-0657

Pursuant to Paragraph 32(e) of the Proposed Settlement Agreement attached to Decision No. 68112:

> "For the next six years, APS shall provide the Commission with biannual reports related to the status of the remote meter reading pilot and implementation plan. The reports shall provide a description of the meter reading technology being implemented, APS' plan for implementation, the number and type of customers involved in the pilot program, the cost associated with implementation, and the operational efficiencies assiociated with implementation."

Attached please find the the September 2009 AMI Biannual ACC Report.

If you should have any questions regarding the information contained herein, please call me at 602-250-3730.

Sincerely,

Leland R. Snook

LRS/jjb

Attachments

Cc: Brian Bozzo
Barbara Keene

Arizona Corporation Commission
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Arizona Public Service
AMI Plan Biannual ACC Report
September 2009

Introduction

Decision No. 68112 requires Arizona Public Service ("APS") to provide the Arizona Corporation Commission("ACC") with biannual reports through 2011 related to the status of APS's remote meter reading implementation. This report provides a description of the meter reading technology being installed, APS's plan for implementation, the number and type of customers involved in the program, and costs and operational efficiencies associated with implementation. This is the eighth biannual filing addressing the status of Advanced Metering Infrastructure ("AMI") Plan and progress since March 2009.

Overview

Since the March 2009 biannual report, APS has continued to install AMI smart meters throughout metropolitan Phoenix and expanded installation in Flagstaff. The number of APS customers with AMI smart meters continues to rise and deployment has reached almost forty different cities and towns across APS's service territory, including Casa Grande, Phoenix, Prescott Valley, Flagstaff and Yuma. Over this past summer, APS's AMI deployment efforts were focused in Flagstaff, including the outskirt areas in Coconino County. APS completed deployment of over 38,000 AMI meters for both residential and commercial customers.

The Elster metering system EnergyAxis® is an advanced metering infrastructure system that provides a platform for APS to improve operations and customer service, with features such as remote connect and disconnect capabilities, voltage monitoring, outage notification through bi-directional communication for both residential and commercial meters.

In May 2008, APS entered into a contract with Aclara Software Inc. to implement two Aclara software products: Energy Vision®, Meter Data Management System ("MDMS") and Bill Prism®. These products enhance and facilitate customer care and call center solutions.

APS installed the MDMS which provides the foundation for integration of the next generation of tools that will leverage AMI. Aclara MDMS stores and provides a common interface to customer data transmitted from smart meters. MDMS software provides APS with a suite of advanced service capabilities, including:

- Management of interval meter data and reads
- Interoperability with multiple meter technologies
- Integration with existing APS applications such as Customer Information System ("CIS") and customer website (aps.com)

- A common interface to APS applications enabling APS to rapidly process service orders (connects, disconnects, on-request reads and interval usage and rate changes)

The MDMS is the database of record for all interval electricity usage data and supports a number of new operational and customer applications.

Bill Prism® is a web portal which integrates smart meter data with the Customer Information System and APS.com website. This allows APS customers to view their electricity consumption graphically and provide information to assist with managing energy usage. This system provides an in-depth bill analysis function using smart meter data. In addition, Bill Prism® also provides residential customers with a carbon calculator and assists them in quantifying and reducing their personal carbon footprint.

In August 2009, APS submitted an investment grant application to the Department of Energy in response to the American Recovery and Reinvestment Act of 2009. This is Smart Grid Investment Grant Program for the Advance Metering Infrastructure Project. APS is seeking cost sharing for 50% of allowable project costs.

Project Status

Meter Deployment:

As stated in the March 2009 biannual report, APS completed installation of 156,000 P1D meters as of September 2008. Installation of Elster meters began in December 2008 and through the end of August this year approximately 104,000 meters have been installed. APS expects to deploy a total of 169,000 Elster smart meters by the end of 2009. In the next three years, APS plans to install approximately 631,000 additional smart meters.

Systems Integration:

During the past year, APS's project focus has been a parallel endeavor of integrating both of the AMI systems, EnergyAxis® and AMS9000®, with the Aclara MDMS and completing the implementation of MDMS and Bill Prism®.

Since the last filing the milestones achieved include:

- Installation of base MDMS which acts as the data repository for all customer interval data usage
- Integration of AMI systems, Elster Energy Axis® and P1D AMS900® with Aclara's MDMS
- Bill Prism® integration with APS.com provides both APS customers and customer service representatives a tool to manage energy bills and electric usage, provide bill views, complete energy consumption comparisons, summarize account information, and allows customers to view their hourly energy usage on aps.com.

Currently, APS is working on expanding the Aclara MDMS system by integrating with multiple legacy systems such as CIS and MV90 and adding business service functionality allowing the MDMS to become the single automated integration point managing all service orders for smart meters.

Costs

This project has three main cost components: meters and meter installation, monthly cellular communications, and interface development.

Meters and Installation:

Elster AMI technology has added three phase meters to APS's AMI project. Average installed cost of an Elster meter for this reporting period was approximately $164.84. This includes single phase, three phase and collector meters.

Monthly Cellular Communications:

APS has contracted with KORE Wireless to provide cellular service for meter communications. Through August 2009 the average monthly per meter communication cost was approximately $0.16 for both P1D and Elster meters. As APS further deploys additional Elster meters, the cost of communication is expected to further decline.

Interface Development:

APS has spent approximately $2.6 million dollars on Information Technology integration during this reporting period. This cost includes hardware, software license fees and the development of interfaces to APS systems.

Operational Efficiencies

The ability to read and program meters remotely provides immediate operational efficiencies as well as the potential to significantly reduce the cost of implementing new rate designs.

The table below illustrates the number of field visits eliminated during the last six months for customers with AMI meters.

YYYY/MM	Change Name	Rate Change & Verify	Connects	Disconnects	Total
2009/03	8,125	1,527	136	155	9,943
2009/04	8,144	1,363	259	250	10,016
2009/05	9,234	1,402	332	321	11,289
2009/06	11,226	1,806	560	580	14,172
2009/07	11,676	1,924	712	725	15,037
2009/08	10,792	1,879	817	865	14,353
Total	59,197	9,901	2,816	2,896	74,810

Reduction of field trips results in lower fuel consumption and reduced emissions, which support APS's effort to reduce its carbon footprint. Reducing field trips also supports APS's corporate value of safety by reducing the potential for vehicular accidents and other safety-related events.

In addition, APS completed the utilization of AMI meters to resolve meter reading access issues as part of the Access Improvement Plan (AIP) approved by the Commission.

Summary

Since the March 2009 report, APS has:

- Installed 89,028 Elster meters
- Successfully completed installation of Bill Prism® integration to APS.com
- Successfully implemented Energy Vision® MDMS base product
- Successfully completed integration with MDMS to Bill Prism® utilizing AMI interval data

Within the next six months APS expects to:

- Continue deployment of Elster smart meters
- Continue expanding the Aclara MDMS system by adding an array of business service functionality such as enabling the ability to remotely process service orders
- Explore additional applications that can leverage smart meter data:
    - Outage Management System interface to AMI Systems. Integration between these systems will generate an automated order which enables operators to dispatch crews to the location of the failed device more quickly. AMI meters also provide restoration notification allowing operators to identify nested outages (a smaller outage within an outage area that is not restored when repairs are made) before crews leave an area.

In conclusion, APS continues to deploy AMI smart meters throughout its service territory. Over the past six months APS has made significant progress in building the foundation to manage smart meter data. Through these efforts, APS will create an advanced technology platform to meet growing customer expectations for better management of electricity consumption and costs.

The next report will be submitted in March 2010.